

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/033063

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F01N3/023 F01N3/027 F01N3/035

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 404 795 A (KOBASHI KIYOSHI ET AL) 20 September 1983 (1983-09-20) column 4, line 36 - column 10, line 32; figures 2,5	1,3-6,9, 13-15,18
X	GB 892 659 A (SCHWEIZERISCHE LOKOMOTIV) 28 March 1962 (1962-03-28) the whole document	1,2,4,5, 12,18
X A	US 4 902 309 A (HEMPENSTALL GEORGE T) 20 February 1990 (1990-02-20) abstract	1,3-7,18 8
X	EP 1 333 169 A (EBERSPAECHER J GMBH & CO) 6 August 2003 (2003-08-06) paragraph '0019! - paragraph '0037!; claim 1; figure 1	1,3-6, 10,11, 16,18
----- -/--		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

B document member of the same patent family

Date of the actual completion of the international search

24 January 2005

Date of mailing of the international search report

31/01/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Tatus, iJ

INTERNATIONAL SEARCH REPORT

Inter nal Application No
PCT/US2004/033063

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>EP 1 020 620 A (VOLKSWAGENWERK AG) 19 July 2000 (2000-07-19) paragraph '0020! - paragraph '0031! -----</p>	<p>1,2,4-7, 18</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US2004/033063

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4404795	A	20-09-1983	JP 1390402 C JP 57008311 A JP 61057925 B	23-07-1987 16-01-1982 09-12-1986
GB 892659	A	28-03-1962	NONE	
US 4902309	A	20-02-1990	NONE	
EP 1333169	A	06-08-2003	DE 10204073 A1 EP 1333169 A1	14-08-2003 06-08-2003
EP 1020620	A	19-07-2000	DE 19900967 A1 AT 261544 T DE 59908807 D1 EP 1020620 A1	20-07-2000 15-03-2004 15-04-2004 19-07-2000